



SEQUENCE LISTING

<110> Affymetrix, Inc.
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<120> Computer Software for Automated Annotation of Biological Sequences

<130> 018547-048820US

<140> US 09/683,264
<141> 2001-12-05

<150> US 60/285,144
<151> 2001-04-19

<150> US 60/285,403
<151> 2001-04-20

<160> 5

<170> PatentIn version 3.3

<210> 1
<211> 373
<212> PRT
<213> Artificial

<220>
<223> Protein with similarity to VHR dual specificity phosphatase

<400> 1

Leu Leu Gln Asp Ser Leu Leu Arg Leu Lys Asp Tyr Arg Gln Cys Phe
1 5 10 15

Glu Cys Ser Asp Val Ala Leu Asn Glu Ala Val Gln Gln Met Val Asn
20 25 30

Ser Gly Glu Ala Ala Ala Lys Glu Glu Trp Val Ala Thr Val Thr Gln
35 40 45

Leu Leu Met Gly Ile Glu Gln Ala Leu Ser Ala Asp Ser Ser Gly Ser
50 55 60

Ile Leu Lys Val Ser Ser Ser Thr Thr Gly Leu Val Arg Leu Thr Asn
65 70 75 80

Asn Leu Ile Gln Val Ile Asp Cys Ser Met Ala Val Gln Glu Glu Ala
85 90 95

Lys Glu Pro His Val Ser Ser Val Leu Pro Trp Ile Ile Leu His Arg
100 105 110

Ile Ile Trp Gln Glu Glu Asp Thr Phe His Ser Leu Cys His Gln Gln
 115 120 125

Gln Leu Gln Asn Pro Ala Glu Glu Gly Met Ser Glu Thr Pro Met Leu
 130 135 140

Pro Ser Ser Leu Met Leu Leu Asn Thr Ala His Glu Tyr Leu Gly Arg
 145 150 155 160

Arg Ser Trp Cys Cys Asn Ser Asp Gly Ala Leu Leu Arg Phe Tyr Val
 165 170 175

Arg Val Leu Gln Lys Glu Leu Ala Ala Ser Thr Ser Glu Asp Thr His
 180 185 190

Pro Tyr Lys Glu Glu Leu Glu Thr Ala Leu Glu Gln Cys Phe Tyr Cys
 195 200 205

Leu Tyr Ser Phe Pro Ser Lys Lys Ser Lys Ala Arg Tyr Leu Glu Glu
 210 215 220

His Ser Ala Gln Gln Val Asp Leu Ile Trp Glu Asp Ala Leu Phe Met
 225 230 235 240

Phe Glu Tyr Phe Lys Pro Lys Thr Leu Pro Glu Phe Asp Ser Tyr Lys
 245 250 255

Thr Ser Thr Val Ser Ala Asp Leu Ala Asn Leu Leu Lys Arg Ile Ala
 260 265 270

Thr Ile Val Pro Arg Thr Glu Arg Pro Ala Leu Ser Leu Asp Lys Val
 275 280 285

Ser Ala Tyr Ile Glu Gly Thr Ser Thr Glu Val Pro Cys Leu Pro Glu
 290 295 300

Gly Ala Asp Pro Ser Pro Pro Val Val Asn Glu Leu Tyr Tyr Leu Leu
 305 310 315 320

Ala Asp Tyr His Phe Lys Asn Lys Glu Gln Ser Lys Ala Ile Lys Phe
 325 330 335

Tyr Met His Asp Ile Cys Ile Cys Pro Asn Arg Phe Asp Ser Trp Ala
 340 345 350

Gly Met Ala Leu Ala Arg Ala Ser Arg Ile Gln Asp Lys Leu Asn Ser
 355 360 365

Asn Glu Leu Lys Ser
 370

<210> 2
 <211> 178
 <212> PRT
 <213> Artificial

<220>
 <223> VHR dual specificity phosphatase

<400> 2

Ser Val Gln Asp Leu Asn Asp Leu Leu Ser Asp Gly Ser Gly Cys Tyr
 1 5 10 15

Ser Leu Pro Ser Gln Pro Cys Asn Glu Val Thr Pro Arg Ile Tyr Val
 20 25 30

Gly Asn Ala Ser Val Ala Gln Asp Ile Pro Lys Leu Gln Lys Leu Gly
 35 40 45

Ile Thr His Val Leu Asn Ala Ala Glu Gly Arg Ser Phe Met His Val
 50 55 60

Asn Thr Asn Ala Asn Phe Tyr Lys Asp Ser Gly Ile Thr Tyr Leu Gly
 65 70 75 80

Ile Lys Ala Asn Asp Thr Gln Glu Phe Asn Leu Ser Ala Tyr Phe Glu
 85 90 95

Arg Ala Ala Asp Phe Ile Asp Gln Ala Leu Ala Gln Lys Asn Gly Arg
 100 105 110

Val Leu Val His Cys Arg Glu Gly Tyr Ser Arg Ser Pro Thr Leu Val
 115 120 125

Ile Ala Tyr Leu Met Met Arg Gln Lys Met Asp Val Lys Ser Ala Leu
 130 135 140

Ser Ile Val Arg Gln Asn Arg Glu Ile Gly Pro Asn Asp Gly Phe Leu
 145 150 155 160

Ala Gln Leu Cys Gln Leu Asn Asp Arg Leu Ala Lys Glu Gly Lys Leu
 165 170 175

Lys Pro

<210> 3
<211> 159
<212> PRT
<213> Artificial

<220>
<223> Protein phosphatase 5

<400> 3

Pro Pro Ala Asp Gly Ala Leu Lys Arg Ala Glu Glu Leu Lys Thr Gln
1 5 10 15

Ala Asn Asp Tyr Phe Lys Ala Lys Asp Tyr Glu Asn Ala Ile Lys Phe
20 25 30

Tyr Ser Gln Ala Ile Glu Leu Asn Pro Ser Asn Ala Ile Tyr Tyr Gly
35 40 45

Asn Arg Ser Leu Ala Tyr Leu Arg Thr Glu Cys Tyr Gly Tyr Ala Leu
50 55 60

Gly Asp Ala Thr Arg Ala Ile Glu Leu Asp Lys Lys Tyr Ile Lys Gly
65 70 75 80

Tyr Tyr Arg Arg Ala Ala Ser Asn Met Ala Leu Gly Lys Phe Arg Ala
85 90 95

Ala Leu Arg Asp Tyr Glu Thr Val Val Lys Val Lys Pro His Asp Lys
100 105 110

Asp Ala Lys Met Lys Tyr Gln Glu Cys Asn Lys Ile Val Lys Gln Lys
115 120 125

Ala Phe Glu Arg Ala Ile Ala Gly Asp Glu His Lys Arg Ser Val Val
130 135 140

Asp Ser Leu Asp Ile Glu Ser Met Thr Ile Glu Asp Glu Tyr Ser
145 150 155

<210> 4
<211> 235
<212> PRT
<213> Artificial

<220>

<223> Protein with protein phosphatase 5 fold

<400> 4

Pro Leu Cys Lys Gln Ala Leu Glu Asp Leu Glu Lys Thr Ser Gly His
1 5 10 15

Asp His Pro Asp Val Ala Thr Met Leu Asn Ile Leu Ala Leu Val Tyr
20 25 30

Arg Asp Gln Asn Lys Tyr Lys Glu Ala Ala His Leu Leu Asn Asp Ala
35 40 45

Leu Ala Ile Arg Glu Lys Thr Leu Gly Lys Asp His Pro Ala Val Ala
50 55 60

Ala Thr Leu Asn Asn Leu Ala Val Leu Tyr Gly Lys Arg Gly Lys Tyr
65 70 75 80

Lys Glu Ala Glu Pro Leu Cys Lys Arg Ala Leu Glu Ile Arg Glu Lys
85 90 95

Val Leu Gly Lys Phe His Pro Asp Val Ala Lys Gln Leu Ser Asn Leu
100 105 110

Ala Leu Leu Cys Gln Asn Gln Gly Lys Ala Glu Glu Val Glu Tyr Tyr
115 120 125

Tyr Arg Arg Ala Leu Glu Ile Tyr Ala Thr Arg Leu Gly Pro Asp Asp
130 135 140

Pro Asn Val Ala Lys Thr Lys Asn Asn Leu Ala Ser Cys Tyr Leu Lys
145 150 155 160

Gln Gly Lys Tyr Gln Asp Ala Glu Thr Leu Tyr Lys Glu Ile Leu Thr
165 170 175

Arg Ala His Glu Lys Glu Phe Gly Ser Val Asn Gly Asp Asn Lys Pro
180 185 190

Ile Trp Met His Ala Glu Glu Arg Glu Glu Ser Lys Asp Lys Arg Arg
195 200 205

Asp Ser Ala Pro Tyr Gly Glu Tyr Gly Ser Trp Tyr Lys Ala Cys Lys
210 215 220

Val Asp Ser Pro Thr Val Asn Thr Thr Leu Arg

225

230

235

<210> 5
 <211> 233
 <212> PRT
 <213> Artificial

<220>
 <223> Protein with protein phosphatase 5 fold

<400> 5

Lys Asp Trp Lys Gly Ala Leu Asp Ala Phe Ser Ala Val Gln Asp Pro
 1 5 10 15

His Ser Arg Ile Cys Phe Asn Ile Gly Cys Met Tyr Thr Ile Leu Lys
 20 25 30

Asn Met Thr Glu Ala Glu Lys Ala Phe Thr Arg Ser Ile Asn Arg Asp
 35 40 45

Lys His Leu Ala Val Ala Tyr Phe Gln Arg Gly Met Leu Tyr Tyr Gln
 50 55 60

Thr Glu Lys Tyr Asp Leu Ala Ile Lys Asp Leu Lys Glu Ala Leu Ile
 65 70 75 80

Gln Leu Arg Gly Asn Gln Leu Ile Asp Tyr Lys Ile Leu Gly Leu Gln
 85 90 95

Phe Lys Leu Phe Ala Cys Glu Val Leu Tyr Asn Ile Ala Phe Met Tyr
 100 105 110

Ala Lys Lys Glu Glu Trp Lys Lys Ala Glu Glu Gln Leu Ala Leu Ala
 115 120 125

Thr Ser Met Lys Ser Glu Pro Arg His Ser Lys Ile Asp Lys Ala Met
 130 135 140

Glu Cys Val Trp Lys Gln Lys Leu Tyr Glu Pro Val Val Ile Pro Val
 145 150 155 160

Gly Lys Leu Phe Arg Pro Asn Glu Arg Gln Val Ala Gln Leu Ala Lys
 165 170 175

Lys Asp Tyr Leu Gly Lys Ala Thr Val Val Ala Ser Val Val Asp Gln
 180 185 190

Asp Ser Phe Ser Gly Phe Ala Pro Leu Gln Pro Gln Ala Ala Glu Pro
195 200 205

Pro Pro Arg Pro Lys Thr Pro Glu Ile Phe Arg Ala Leu Glu Gly Glu
210 215 220

Ala His Arg Val Leu Phe Gly Phe Val
225 230